

Recombinant Human Alpha-2-macroglobulin/A2M Protein

Catalog No.: RP00785

Sequence Information

Species	Gene ID
Human	2
Swiss Prot	Tags
P01023	C-8His

Synonyms

A2M, Alpha-2-macroglobulin, Alpha-2-M, CPAMD5

Product Information

Source	Purification
HEK293 cells	> 95 % as determined by SDS-PAGE.

Calculated MW **Observed MW**
161.9 kDa

Endotoxin

< 0.01 EU/μg of the protein by LAL method.

Formulation

Lyophilized from 0.22μm filtered solution in PBS (pH 7.4).

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1–0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

alpha-2-macroglobulin, also known as α2-macroglobulin (α2M and A2M), is an abundant protein of the plasma of vertebrates and members of several invertebrate phyla and functions as a broad-spectrum protease-binding protein. alpha-2-macroglobulin is produced by the liver, and is a major component of the alpha-2 band in protein electrophoresis. alpha-2-macroglobulin is a large plasma glycoprotein that has long been known as an irreversible inhibitor of a variety of proteinases. More recently, it has been reported that numerous growth factors, cytokines and hormones bind to alpha 2M through diverse mechanisms. A2M is also produced in the brain where it binds multiple extracellular ligands and is internalized by neurons and astrocytes. In the brain of Alzheimer's disease (AD) patients, A2M has been localized to diffuse amyloid plaques. A2M also binds soluble beta-amyloid, of which it mediates degradation. Protease-conjugated alpha2-macroglobulin is selectively bound by cells contacting the body fluids and alpha2-macroglobulin and its protease cargo are then internalized and degraded in secondary lysosomes of those cells. In addition to this function as an agent for protease clearance, alpha2-macroglobulin binds a variety of other ligands, including several peptide growth factors and modulates the activity of a lectin-dependent cytolytic pathway in arthropods.

Basic Information

Description

Recombinant Human Alpha-2-macroglobulin/A2M Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ser24–Ala1474) of Human Alpha-2-macroglobulin/A2M (Accession # NP_000005.3) fused with His tag at the C-Terminus.

Activity

Shipping

Lyophilized proteins are shipped at ambient temperature. Liquid proteins are shipped at frozen temperature with dry ice. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C

Operational Notes

For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

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Validation Data

No validation data available.